

SEQUENCE LISTING

<110> Donoho, Gregory
 Scoville, John
 Turner, C. Alexander Jr.
 Friedrich, Glenn
 Zambrowicz, Brian
 Sands, Arthur T.

<120> Novel Human Membrane Proteins and
 Polynucleotides Encoding the Same

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<150> US 60/169,427

<151> 1999-12-07

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Phe	Asn	Thr	Tyr	Phe	Gly	His	Tyr	Phe	Leu	Lys	Leu	Ser	Leu	Val	Gly
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Tyr	Gly	Leu	Tyr	Thr	Ile	Arg	Asp	Arg	Glu	Asn	Arg	Thr	Ser	Leu	Glu
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 Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro Pro Asn Met Thr Leu
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 Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly Asp Trp Ser
 65 70 75 80
 Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr Val Cys Cys
 85 90 95
 Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro Thr Leu Asp
 100 105 110
 Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala Gly Cys Gly
 115 120 125
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 130 135 140
 Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys Ile His
 145 150 155 160
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 Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp Ala Arg
 180 185 190
 Gly Ala Val Phe His Tyr Phe Leu Cys Ala Phe Thr Trp Met Gly
 195 200 205
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 Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu Cys Trp
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 275 280 285
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 Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu
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<212> PRT

<213> Homo sapiens

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Gln	Asn	Leu	Ser	Thr	Asn	Thr	Ala	Glu	Asp	Phe	Tyr	Phe	Ser	Leu	Glu
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Pro	Ser	Gln	Val	Pro	Arg	Gln	Val	Met	Lys	Asp	Glu	Asp	Lys	Pro	Pro
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Leu Tyr Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp
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 Ala Pro Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn
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 325 330 335
 Ala Cys Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala
 340 345 350
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 355 360 365
 Arg Val Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu
 370 375 380
 Val Gly Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala
 385 390 395 400
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 405 410 415
 Leu Glu Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr
 420 425 430
 Ile Thr Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val
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 Ala Val Lys Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser
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 gccctgggtg gcagcctgtt cctcctgaat ctggccttct tgggtcaatgt ggggagtggc 360
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 ctctatatca ccgtccacgg ctacttcctc atcaccttcc tctttggcat ggtggctctg 720
 gccctgggtg tctggaagat cttcaccctg tcccgtgcta cagcgggtcaa ggagcggggg 780
 aagaaccggt gctcaccctg ctgggcctct cgagccttgc aagttgggtg tccatcgtcc 840
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<210> 16
 <211> 294
 <212> PRT
 <213> Homo sapiens

<400> 16

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Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly
 1          5          10          15
Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr
 20          25          30
Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Arg Pro
 35          40          45
Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala
 50          55          60
Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
 65          70          75          80
Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro
 85          90          95
Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala
 100          105          110
Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys
 115          120          125
Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr
 130          135          140
Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val
 145          150          155          160
Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly
 165          170          175
Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser
 180          185          190
Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu
 195          200          205
Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr
 210          215          220
Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu
 225          230          235          240
Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val
 245          250          255
Lys Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala
 260          265          270
Leu Gln Val Gly Cys Pro Ser Ser Ile Ser Gly Pro Ile Ser Cys Asp
 275          280          285
Gln Lys Gly Arg Ile Met
 290

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<210> 17

<211> 1068

<212> DNA

<213> Homo sapiens

<400> 17

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catgtcacca agctggctga gcctctggag atcgtcttct ctcaccagcg accgcccct      180
aacatgacct tcacctgtgt attctgggat gtgactaaag ggaccactgg agactggctc      240
tctgagggct gctccacgga ggtcagacct gaggggaccg tgtgctgctg tgaccacctg      300
acctttttcg cctgctcct gagaccacc ttggaccagt ccacggtgca tatcctcaca      360
cgcatctccc aggcgggctg tggggctctc atgatcttcc tggccttcac cattattctt      420
tatgcctttc tgaggctttc ccgggagagg ttcaagtcag aagatgcccc aaagatccac      480
gtggccctgg gtggcagcct gttcctcctg aatctggcct tcttggtcaa tgtggggagt      540
ggctcaaagg ggtctgatgc tgctgctgg gcccgggggg ctgtcttcca ctacttctg      600

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ctctgtgcct tcacctggat gggccttgaa gccttccacc tctacctgct cgctgtcagg 660
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cccgccttga tggatcatcg cactgggagt gccaacagct acggcctcta caccatccgt 780
gatagggaga accgcacctc tctggagcta tgctgggttc gtgaagggac aaccatgtac 840
gccctctata tcaccgtcca cggtacttcc ctcatacact tcctctttgg catgggtggc 900
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gggaagaacc ggtgtctcacc ctgtctgggc tctcgagcct tgcaagttgg gtgtccatcg 1020
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<210> 18
 <211> 355
 <212> PRT
 <213> Homo sapiens

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<400> 18
Met Ala Pro Ser Ala Ala Trp Pro Pro Arg Ser Pro Leu Ser Gln Gly
1      5      10     15
Pro Arg Leu Gly Leu Gly Asp Gly Ser Gly Val Leu Asn Asn Arg Leu
20     25     30
Val Gly Leu Ser Val Gly Gln Met His Val Thr Lys Leu Ala Glu Pro
35     40     45
Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro Pro Asn Met Thr Leu
50     55     60
Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly Asp Trp Ser
65     70     75     80
Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr Val Cys Cys
85     90     95
Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro Thr Leu Asp
100    105    110
Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala Gly Cys Gly
115    120    125
Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr Ala Phe Leu
130    135    140
Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys Ile His
145    150    155    160
Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe Leu Val
165    170    175
Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp Ala Arg
180    185    190
Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp Met Gly
195    200    205
Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe Asn Thr
210    215    220
Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp Gly Leu
225    230    235    240
Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr Gly Leu
245    250    255
Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu Cys Trp
260    265    270
Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly
275    280    285
Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala Leu Val
290    295    300
Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg
305    310    315    320
Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala Leu Gln Val

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325 330 335
 Gly Cys Pro Ser Ser Ile Ser Gly Pro Ile Ser Cys Asp Gln Lys Gly
 340 345 350
 Arg Ile Met
 355

<210> 19
 <211> 690
 <212> DNA
 <213> Homo sapiens

<400> 19
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 ctgttcctcc tgaatctggc cttcttggtc aatgtgggga gtggctcaaa ggggtctgat 180
 gctgcctgct gggccccggg ggcctgtctc cactacttcc tgctctgtgc cttcacctgg 240
 atgggccttg aagccttcca cctctacctg ctgcctgtca gggctcttcaa cacctacttc 300
 gggcactact tcttgaagct gagcctgggtg ggcctggggcc tgcccgcctt gatggctatc 360
 ggcactggga gtgccaacag ctacggcctc tacaccatcc gtgataggga gaaccgcacc 420
 tctctggagc tatgtctggtt ccgtgaaggg acaaccatgt acgccctcta tatcaccgtc 480
 cacggctact tctcatcac cttctctttt ggcatgggtg tctggccctt ggtgggtctgg 540
 aagatcttca cctgtccccg tgctacagcg gtcaaggagc gggggaagaa ccggtgctca 600
 ccctgctggg cctctcgagc cttgcaagtt ggggtgtccat cgtccatctc tgggtccaatc 660
 agctgcgacc agaagggcag aatcatgtga 690

<210> 20
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 20
 Met Gly Ala Pro His Gly Ser Cys Gly Pro Leu Gly Pro Leu Ile Ser
 1 5 10 15
 His Pro Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys
 20 25 30
 Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe
 35 40 45
 Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
 50 55 60
 Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
 65 70 75 80
 Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
 85 90 95
 Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
 100 105 110
 Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
 115 120 125
 Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
 130 135 140
 Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
 145 150 155 160
 His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
 165 170 175
 Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
 180 185 190
 Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala Leu

195 200 205
 Gln Val Gly Cys Pro Ser Ser Ile Ser Gly Pro Ile Ser Cys Asp Gln
 210 215 220
 Lys Gly Arg Ile Met
 225

<210> 21
 <211> 477
 <212> DNA
 <213> Homo sapiens

<400> 21
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 gccagggtggc ggccccctccc acagcgggag agccagggat tgatgggtgg aaatgggaga 120
 ggcaccttca cagacagaaa agctcagcca ggggacttcc tgggtttgct ggccagaggt 180
 accactccca gtcccaccac agctgcccc tctccagat gctgggttccg tgaagggaca 240
 accatgtacg cctctatat caccgtccac ggctacttcc tcatcacctt cctctttggc 300
 atgggtgggcc tggccctggg ggtctggaag atcttcaccc tgtcccgtgc tacagcggtc 360
 aaggagcggg ggaagaaccg gtgctcacc ctcgagcctt gcaagttggg 420
 tgtccatcgt ccatctctgg tccaatcagc tgcgaccaga agggcagaat catgtga 477

<210> 22
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 22
 Met Gly Gln Met Lys His Val Phe Glu Val Thr Leu Ala Leu Lys Arg
 1 5 10 15
 His Gln Thr Gly Ala Arg Trp Arg Pro Leu Pro Gln Arg Glu Ser Gln
 20 25 30
 Gly Leu Met Gly Gly Asn Gly Arg Gly Thr Phe Thr Asp Arg Lys Ala
 35 40 45
 Gln Pro Gly Asp Phe Leu Gly Leu Leu Ala Arg Gly Thr Thr Pro Ser
 50 55 60
 Pro Thr Thr Ala Ala Pro Ser Ser Arg Cys Trp Phe Arg Glu Gly Thr
 65 70 75 80
 Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly Tyr Phe Leu Ile Thr
 85 90 95
 Phe Leu Phe Gly Met Val Val Leu Ala Leu Val Val Trp Lys Ile Phe
 100 105 110
 Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg Gly Lys Asn Arg Cys
 115 120 125
 Ser Pro Cys Trp Ala Ser Arg Ala Leu Gln Val Gly Cys Pro Ser Ser
 130 135 140
 Ile Ser Gly Pro Ile Ser Cys Asp Gln Lys Gly Arg Ile Met
 145 150 155

<210> 23
 <211> 1566
 <212> DNA
 <213> Homo sapiens

<400> 23
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 caggaaaagc ccaccgaagg gccaaagaaac acctgcctgg ggagcaacaa catgtacgac 120

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accaacactg cagaagactt ctattttctct ctggagccct ctcagggttcc gaggcaggtg 360
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tccaccgtct acatctttgc acttttcaac tccttgcaag gtgaggcccc tgcaccaggg 1560
aggtga 1566

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<210> 24

<211> 521

<212> PRT

<213> Homo sapiens

<400> 24

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Met Ala Thr Pro Arg Gly Leu Gly Ala Leu Leu Leu Leu Leu Leu Leu
 1          5          10          15
Pro Thr Ser Gly Gln Glu Lys Pro Thr Glu Gly Pro Arg Asn Thr Cys
 20          25          30
Leu Gly Ser Asn Asn Met Tyr Asp Ile Phe Asn Leu Asn Asp Lys Ala
 35          40          45
Leu Cys Phe Thr Lys Cys Arg Gln Ser Gly Ser Asp Ser Cys Asn Val
 50          55          60
Glu Asn Leu Gln Arg Tyr Trp Leu Asn Tyr Glu Ala His Leu Met Lys
 65          70          75          80
Glu Gly Leu Thr Gln Lys Val Asn Thr Pro Phe Leu Lys Ala Leu Val
 85          90          95
Gln Asn Leu Ser Thr Asn Thr Ala Glu Asp Phe Tyr Phe Ser Leu Glu
100          105          110
Pro Ser Gln Val Pro Arg Gln Val Met Lys Asp Glu Asp Lys Pro Pro
115          120          125
Asp Arg Val Arg Leu Pro Lys Ser Leu Phe Arg Ser Leu Pro Gly Asn
130          135          140
Arg Ser Val Val Arg Leu Ala Val Thr Ile Leu Asp Ile Gly Pro Gly
145          150          155          160
Thr Leu Phe Lys Gly Pro Arg Leu Gly Leu Gly Asp Gly Ser Gly Val
165          170          175
Leu Asn Asn Arg Leu Val Gly Leu Ser Val Gly Gln Met His Val Thr
180          185          190

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Lys Leu Ala Glu Pro Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro
195 200 205
Pro Asn Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr
210 215 220
Thr Gly Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu
225 230 235 240
Gly Thr Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu
245 250 255
Arg Pro Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser
260 265 270
Gln Ala Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile
275 280 285
Leu Tyr Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp
290 295 300
Ala Pro Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn
305 310 315 320
Leu Ala Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala
325 330 335
Ala Cys Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala
340 345 350
Phe Thr Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val
355 360 365
Arg Val Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu
370 375 380
Val Gly Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala
385 390 395 400
Asn Ser Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser
405 410 415
Leu Glu Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr
420 425 430
Ile Thr Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val
435 440 445
Val Leu Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr
450 455 460
Ala Val Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu
465 470 475 480
Gly Leu Ser Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr
485 490 495
Pro Leu Gly Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu
500 505 510
Gln Gly Glu Ala Pro Ala Pro Gly Arg
515 520

<210> 25
<211> 936
<212> DNA
<213> Homo sapiens

<400> 25
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gagggtctgt ccacggaggt cagacctgag gggaccgtgt gctgctgtga ccacctgacc 120
tttttcgccc tgctcctgag acccaccttg gaccagtcca cggtgcatat cctcacacgc 180
atctcccagg cgggctgtgg ggtctccatg atcttcctgg ccttcaccat tattctttat 240
gcctttctga ggctttcccg ggagagggtc aagtcagaag atgccccaaa gatccacgtg 300
gccctgggtg gcagcctgtt cctcctgaat ctggccttct tgggtcaatgt ggggagtggc 360
tcaaaggggt ctgatgctgc ctgctggggc cggggggctg tcttcacta cttcctgctc 420

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tgtgccttca cctggatggg ccttgaagcc ttccacctct acctgctcgc tgtcagggtc 480
ttcaacacct acttcgggca ctacttctctg aagctgagcc tgggtgggctg gggcctgccc 540
gccctgatgg tcatcggcac tgggagtgcc aacagctacg gcctctacac catccgtgat 600
agggagaacc gcacctctct ggagctatgc tggttccgtg aagggaacaac catgtacgcc 660
ctctatatca cgtgccacgg ctacttctct atcaccttcc tctttggcat ggtgggtcctg 720
gccctgggtg tctggaagat cttcaccctg tcccgtgcta cagcgggtcaa ggagcggggg 780
aagaaccgga agaaggtgct caccctgctg ggcctctcga gcctgggtggg tgtgacatgg 840
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<210> 26

<211> 311

<212> PRT

<213> Homo sapiens

<400> 26

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Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly
 1          5          10          15
Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr
      20          25          30
Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro
      35          40          45
Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala
      50          55          60
Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
65          70          75          80
Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro
      85          90          95
Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala
      100          105          110
Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys
      115          120          125
Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr
      130          135          140
Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val
145          150          155          160
Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly
      165          170          175
Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser
      180          185          190
Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu
      195          200          205
Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr
      210          215          220
Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu
225          230          235          240
Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val
      245          250          255
Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu
      260          265          270
Ser Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu
      275          280          285
Gly Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly
      290          295          300
Glu Ala Pro Ala Pro Gly Arg
305          310

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<210> 27
<211> 1119
<212> DNA
<213> Homo sapiens
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<400> 27

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<210> 28
<211> 372
<212> PRT
<213> Homo sapiens
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Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp Met Gly
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 Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe Asn Thr
 210 215 220
 Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp Gly Leu
 225 230 235 240
 Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr Gly Leu
 245 250 255
 Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu Cys Trp
 260 265 270
 Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly
 275 280 285
 Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala Leu Val
 290 295 300
 Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg
 305 310 315 320
 Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu
 325 330 335
 Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu Gly Leu Ser
 340 345 350
 Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly Glu Ala Pro
 355 360 365
 Ala Pro Gly Arg
 370

<210> 29
 <211> 741
 <212> DNA
 <213> Homo sapiens

<400> 29
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 ctgttctctcc tgaatctggc cttcttgggc aatgtgggga gtggctcaaa ggggtctgat 180
 gctgcctgct gggcccgggg ggctgtcttc cactacttcc tgctctgtgc cttcacctgg 240
 atgggccttg aagccttcca cctctacctg ctgcgtgtca gggctctcaa cacctacttc 300
 gggcactact tctgaagct gagcctgggt ggctggggcc tgcccgccct gatgggtcatc 360
 ggcactggga gtgccaacag ctacggcctc tacaccatcc gtgataggga gaaccgcacc 420
 tctctggagc tatgtgtggt ccgtgaaggg acaaccatgt acgccctcta tatcaccgtc 480
 cacggctact tctcatcac cttctctttt ggcattgggt tcctggccct ggtggtctgg 540
 aagatcttca ccctgtcccg tgctacagcg gtcaaggagc gggggaagaa ccggaagaag 600
 gtgtcacccc tgctgggcct ctcgagcctg gtgggtgtga catgggggtt ggccatcttc 660
 acccggttgg gcctctccac cgtctacatc ttgtcacttt tcaactcctt gcaaggtgag 720
 gccctgcac caggaggtg a 741

<210> 30
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Gly Ala Pro His Gly Ser Cys Gly Pro Leu Gly Pro Leu Ile Ser
 1 5 10 15
 His Pro Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys
 20 25 30
 Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe

```

      35              40              45
Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
  50              55              60
Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
  65              70              75              80
Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
      85              90              95
Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
      100              105              110
Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
      115              120              125
Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
      130              135              140
Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
      145              150              155              160
His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
      165              170              175
Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
      180              185              190
Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser
      195              200              205
Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu Gly
      210              215              220
Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly Glu
      225              230              235              240
Ala Pro Ala Pro Gly Arg
      245

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<210> 31
 <211> 528
 <212> DNA
 <213> Homo sapiens

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<400> 31
atggggcaaa tgaacatgt ctttgaggtc actttggcat taaagagaca ccagactgga      60
gccaggtggc ggccctccc acagcgggag agccagggat tgatgggtgg aaatgggaga      120
ggcaccttca cagacagaaa agctcagcca ggggacttcc tgggtttgct ggccagaggt      180
accactccca gtcccaccac agctgcccc tcttcagat gctggttccg tgaagggaca      240
accatgtacg cctctatat caccgtccac ggctacttcc tcatcacctt cctctttggc      300
atggtggtcc tggccctggt ggtctggaag atcttcaccc tgtcccgtgc tacagcggtc      360
aaggagcggg ggaagaaccg gaagaagggtg ctcaccctgc tgggcctctc gagcctggtg      420
ggtgtgacat gggggttggc catcttcacc ccgttgggcc tctccaccgt ctacatcttt      480
gcacttttca actccttgca aggtgaggcc cctgcaccag ggaggtga      528

```

<210> 32
 <211> 175
 <212> PRT
 <213> Homo sapiens

```

<400> 32
Met Gly Gln Met Lys His Val Phe Glu Val Thr Leu Ala Leu Lys Arg
  1              5              10              15
His Gln Thr Gly Ala Arg Trp Arg Pro Leu Pro Gln Arg Glu Ser Gln
      20              25              30
Gly Leu Met Gly Gly Asn Gly Arg Gly Thr Phe Thr Asp Arg Lys Ala
      35              40              45

```

Gln Pro Gly Asp Phe Leu Gly Leu Leu Ala Arg Gly Thr Thr Pro Ser
 50 55 60
 Pro Thr Thr Ala Ala Pro Ser Ser Arg Cys Trp Phe Arg Glu Gly Thr
 65 70 75 80
 Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly Tyr Phe Leu Ile Thr
 85 90 95
 Phe Leu Phe Gly Met Val Val Leu Ala Leu Val Val Trp Lys Ile Phe
 100 105 110
 Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg Gly Lys Asn Arg Lys
 115 120 125
 Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu Val Gly Val Thr Trp
 130 135 140
 Gly Leu Ala Ile Phe Thr Pro Leu Gly Leu Ser Thr Val Tyr Ile Phe
 145 150 155 160
 Ala Leu Phe Asn Ser Leu Gln Gly Glu Ala Pro Ala Pro Gly Arg
 165 170 175

<210> 33
 <211> 1458
 <212> DNA
 <213> Homo sapiens

<400> 33
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 caggaaaagc ccaccgaagg gccaaagaaac acctgcctgg ggagcaacaa catgtacgac 120
 atcttcaact tgaatgacaa ggctttgtgc ttcaccaagt gcaggcagtc gggcagcgac 180
 tctgcaatg tggaaaactt gcagagatac tggctaaact acgaggccca tctgatgaag 240
 gaagggttga cgcagaaggt gaacacgcct ttctgaagg ctttggtcca gaacctcagc 300
 accaactctg cagaagactt ctatttctct ctggagccct ctcaggttcc gaggcaggtg 360
 atgaaggacg aggacaagcc ccctgacaga gtgcgacttc ccaagagcct ttttcgatec 420
 ctgccaggca acaggtctgt ggtccgcttg gccgtcacca ttctggacat tgggtccaggg 480
 actctcttca agggcccccg gctcggcctg ggagatggca gcggcgtgtt gaacaatcgc 540
 ctggtgggtt tgagtgtggg acaaatgcat gtcaccaagc tggctgagcc tctggagatc 600
 gtcttctctc accagcgacc gcccctaac atgacctca cctgtgtatt ctgggatgtg 660
 actaaagga cactggaga ctggtcttct gagggctgct ccacggaggt cagacctgag 720
 gggaccgtgt gctgctgtga ccacctgacc tttttcgcct tgctcctgag acccaccttg 780
 gaccagtcca cgggtcatat cctcacacgc atctcccagg cgggctgtgg ggtctccatg 840
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 aagtcagaag atgccccaaa gatccacgtg gccctgggtg gcagcctgtt cctcctgaat 960
 ctggccttct tgggtcaatgt ggggagtggt tcaaaggggt ctgatgctgc ctgctgggcc 1020
 cggggggctg tcttccacta ctctctgctc tgtgccttca cctggatggg ccttgaagcc 1080
 ttccacctct acctgctcgc tgtcagggtc ttcaacacct acttcgggca ctacttctg 1140
 aagctgagcc tgggtgggct gggcctgccc gccctgatgg tcatcggcac tgggagtgcc 1200
 aacagctacg gcctctacac catccgtgat agggagaacc gcacctctt ggagctatgc 1260
 tggttccgtg aagggaacaac catgtacgcc ctctatatca ccgtccacgg ctacttctc 1320
 atcaccttcc tctttggcat ggtggtcctg gccctgggtg tctggaagat cttcacctg 1380
 tcccgtgcta cagcgggtcaa ggagcggggg aagaaccggt gtcaccctg ctgggcctct 1440
 cgagcctggt ggggtgtga 1458

<210> 34
 <211> 485
 <212> PRT
 <213> Homo sapiens

<400> 34
 Met Ala Thr Pro Arg Gly Leu Gly Ala Leu Leu Leu Leu Leu Leu

1		5		10		15									
Pro	Thr	Ser	Gly	Gln	Glu	Lys	Pro	Thr	Glu	Gly	Pro	Arg	Asn	Thr	Cys
			20						25				30		
Leu	Gly	Ser	Asn	Asn	Met	Tyr	Asp	Ile	Phe	Asn	Leu	Asn	Asp	Lys	Ala
		35					40					45			
Leu	Cys	Phe	Thr	Lys	Cys	Arg	Gln	Ser	Gly	Ser	Asp	Ser	Cys	Asn	Val
	50					55					60				
Glu	Asn	Leu	Gln	Arg	Tyr	Trp	Leu	Asn	Tyr	Glu	Ala	His	Leu	Met	Lys
65					70					75					80
Glu	Gly	Leu	Thr	Gln	Lys	Val	Asn	Thr	Pro	Phe	Leu	Lys	Ala	Leu	Val
				85					90					95	
Gln	Asn	Leu	Ser	Thr	Asn	Thr	Ala	Glu	Asp	Phe	Tyr	Phe	Ser	Leu	Glu
			100					105					110		
Pro	Ser	Gln	Val	Pro	Arg	Gln	Val	Met	Lys	Asp	Glu	Asp	Lys	Pro	Pro
		115					120					125			
Asp	Arg	Val	Arg	Leu	Pro	Lys	Ser	Leu	Phe	Arg	Ser	Leu	Pro	Gly	Asn
	130					135					140				
Arg	Ser	Val	Val	Arg	Leu	Ala	Val	Thr	Ile	Leu	Asp	Ile	Gly	Pro	Gly
145					150					155					160
Thr	Leu	Phe	Lys	Gly	Pro	Arg	Leu	Gly	Leu	Gly	Asp	Gly	Ser	Gly	Val
				165					170					175	
Leu	Asn	Asn	Arg	Leu	Val	Gly	Leu	Ser	Val	Gly	Gln	Met	His	Val	Thr
			180					185					190		
Lys	Leu	Ala	Glu	Pro	Leu	Glu	Ile	Val	Phe	Ser	His	Gln	Arg	Pro	Pro
		195					200					205			
Pro	Asn	Met	Thr	Leu	Thr	Cys	Val	Phe	Trp	Asp	Val	Thr	Lys	Gly	Thr
	210					215					220				
Thr	Gly	Asp	Trp	Ser	Ser	Glu	Gly	Cys	Ser	Thr	Glu	Val	Arg	Pro	Glu
225					230					235					240
Gly	Thr	Val	Cys	Cys	Cys	Asp	His	Leu	Thr	Phe	Phe	Ala	Leu	Leu	Leu
			245						250					255	
Arg	Pro	Thr	Leu	Asp	Gln	Ser	Thr	Val	His	Ile	Leu	Thr	Arg	Ile	Ser
			260					265					270		
Gln	Ala	Gly	Cys	Gly	Val	Ser	Met	Ile	Phe	Leu	Ala	Phe	Thr	Ile	Ile
		275					280					285			
Leu	Tyr	Ala	Phe	Leu	Arg	Leu	Ser	Arg	Glu	Arg	Phe	Lys	Ser	Glu	Asp
	290					295					300				
Ala	Pro	Lys	Ile	His	Val	Ala	Leu	Gly	Gly	Ser	Leu	Phe	Leu	Leu	Asn
305					310					315					320
Leu	Ala	Phe	Leu	Val	Asn	Val	Gly	Ser	Gly	Ser	Lys	Gly	Ser	Asp	Ala
				325					330					335	
Ala	Cys	Trp	Ala	Arg	Gly	Ala	Val	Phe	His	Tyr	Phe	Leu	Leu	Cys	Ala
			340					345					350		
Phe	Thr	Trp	Met	Gly	Leu	Glu	Ala	Phe	His	Leu	Tyr	Leu	Leu	Ala	Val
		355					360					365			
Arg	Val	Phe	Asn	Thr	Tyr	Phe	Gly	His	Tyr	Phe	Leu	Lys	Leu	Ser	Leu
	370					375					380				
Val	Gly	Trp	Gly	Leu	Pro	Ala	Leu	Met	Val	Ile	Gly	Thr	Gly	Ser	Ala
385					390					395					400
Asn	Ser	Tyr	Gly	Leu	Tyr	Thr	Ile	Arg	Asp	Arg	Glu	Asn	Arg	Thr	Ser
			405						410					415	
Leu	Glu	Leu	Cys	Trp	Phe	Arg	Glu	Gly	Thr	Thr	Met	Tyr	Ala	Leu	Tyr
			420					425					430		
Ile	Thr	Val	His	Gly	Tyr	Phe	Leu	Ile	Thr	Phe	Leu	Phe	Gly	Met	Val
		435					440					445			
Val	Leu	Ala	Leu	Val	Val	Trp	Lys	Ile	Phe	Thr	Leu	Ser	Arg	Ala	Thr

09733387 120700

450 455 460
Ala Val Lys Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser
465 470 475 480
Arg Ala Trp Trp Val
485

<210> 35
<211> 828
<212> DNA
<213> Homo sapiens

<400> 35
atgaccctca cctgtgtatt ctgggatgtg actaaaggga ccaactggaga ctggtcttct 60
gagggtctgt ccacggaggt cagacctgag gggaccgtgt gctgctgtga ccacctgacc 120
tttttcgccc tgctcctgag acccaccctg gaccagtcca cggtgcatat cctcacacgc 180
atctcccagg cgggctgtgg ggtctccatg atcttcctgg ccttcacat tattctttat 240
gcctttctga ggctttcccg ggagaggttc aagtcagaag atgccccaaa gatccacgtg 300
gccctgggtg gcagcctgtt cctcctgaat ctggccttct tgggtcaatgt ggggagtggc 360
tcaaaggggt ctgatgctgc ctgctgggcc cggggggctg tcttccacta cttcctgctc 420
tgtgccttca cctggatggg ccttgaagcc ttccacctct acctgctcgc tgtcagggtc 480
ttcaacacct acttcgggca ctacttctct aagctgagcc tgggtgggctg gggcctgccc 540
gccctgatgg tcatcggcac tgggagtggc aacagctacg gcctctacac catccgtgat 600
agggagaacc gcacctctct ggagctatgc tgggtccgtg aagggaacaac catgtacgcc 660
ctctatatca ccgtccacgg ctacttctct atcaccttcc tctttggcat ggtggctctg 720
gccctggtgg tctggaagat cttcaccctg tcccgtgcta cagcgggcaa ggagcggggg 780
aagaaccggt gctcaccctg ctgggcctct cgagcctggg ggggtgtga 828

<210> 36
<211> 275
<212> PRT
<213> Homo sapiens

<400> 36
Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly
1 5 10 15
Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr
20 25 30
Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro
35 40 45
Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala
50 55 60
Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
65 70 75 80
Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro
85 90 95
Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala
100 105 110
Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys
115 120 125
Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr
130 135 140
Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val
145 150 155 160
Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly
165 170 175
Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser

Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro Thr Leu Asp
 100 105 110
 Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala Gly Cys Gly
 115 120 125
 Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr Ala Phe Leu
 130 135 140
 Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys Ile His
 145 150 155 160
 Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe Leu Val
 165 170 175
 Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp Ala Arg
 180 185 190
 Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp Met Gly
 195 200 205
 Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe Asn Thr
 210 215 220
 Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp Gly Leu
 225 230 235 240
 Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr Gly Leu
 245 250 255
 Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu Cys Trp
 260 265 270
 Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly
 275 280 285
 Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala Leu Val
 290 295 300
 Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg
 305 310 315 320
 Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala Trp Trp Val
 325 330 335

<210> 39
 <211> 633
 <212> DNA
 <213> Homo sapiens

<400> 39
 atgggagctc cccatgggag ctgtggcccc ttggggcctc ttattttctca ccccaggctt 60
 tcccgggaga ggttcaagtc agaagatgcc ccaaagatcc acgtggccct ggggtggcagc 120
 ctgttcctcc tgaatctggc cttcttggtc aatgtgggga gtggctcaaa ggggtctgat 180
 gctgcctgct gggcccgggg ggctgtcttc cactacttcc tgctctgtgc cttcacctgg 240
 atgggccttg aagccttcca cctctacctg ctgcgtgtca gggctcttcaa cacctacttc 300
 gggcactact tcctgaagct gaggctgggtg ggctggggcc tgcccgcctt gatggtcatc 360
 ggcactggga gtgccaacag ctacggcctc tacaccatcc gtgataggga gaaccgcacc 420
 tctctggagc tatgctggtt ccgtgaaggg acaaccatgt acgccctcta tatcaccgtc 480
 cacggctact tcctcatcac ctctctcttt ggcatgggtg tcctggccct ggtggtctgg 540
 aagatcttca cctgtccccg tgctacagcg gtcaaggagc gggggaagaa ccggtgtctca 600
 cctgtctggg cctctcgagc ctggtgggtg tga 633

<210> 40
 <211> 210
 <212> PRT
 <213> Homo sapiens

<400> 40
 Met Gly Ala Pro His Gly Ser Cys Gly Pro Leu Gly Pro Leu Ile Ser

```

      1             5             10             15
His Pro Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys
      20             25             30
Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe
      35             40             45
Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
      50             55             60
Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
      65             70             75             80
Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
      85             90             95
Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
      100            105            110
Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
      115            120            125
Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
      130            135            140
Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
      145            150            155            160
His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
      165            170            175
Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
      180            185            190
Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala Trp
      195            200            205
Trp Val
      210

```

```

<210> 41
<211> 420
<212> DNA
<213> Homo sapiens

```

```

<400> 41
atggggcaaaa tgaacatgt ctttgaggtc actttggcat taaagagaca ccagactgga      60
gccaggtggc ggccctccc acagcgggag agccagggat tgatgggtgg aaatgggaga      120
ggcaccttca cagacagaaa agctcagcca ggggacttcc tgggtttgct ggccagaggt      180
accactccca gtcccaccac agctgcccc tcttccagat gctggttccg tgaagggaca      240
accatgtacg cctctatat caccgtccac ggctacttcc tcatcacctt cctctttggc      300
atgggtggtcc tggccctggt ggtctggaag atcttcaccc tgtcccgtgc tacagcggtc      360
aaggagcggg ggaagaaccg gtgctcacc tgctgggcct ctcgagcctg gtgggtgtga      420

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```

<210> 42
<211> 139
<212> PRT
<213> Homo sapiens

```

```

<400> 42
Met Gly Gln Met Lys His Val Phe Glu Val Thr Leu Ala Leu Lys Arg
      1             5             10             15
His Gln Thr Gly Ala Arg Trp Arg Pro Leu Pro Gln Arg Glu Ser Gln
      20             25             30
Gly Leu Met Gly Gly Asn Gly Arg Gly Thr Phe Thr Asp Arg Lys Ala
      35             40             45
Gln Pro Gly Asp Phe Leu Gly Leu Leu Ala Arg Gly Thr Thr Pro Ser
      50             55             60

```

Pro	Thr	Thr	Ala	Ala	Pro	Ser	Ser	Arg	Cys	Trp	Phe	Arg	Glu	Gly	Thr
65					70					75					80
Thr	Met	Tyr	Ala	Leu	Tyr	Ile	Thr	Val	His	Gly	Tyr	Phe	Leu	Ile	Thr
				85					90					95	
Phe	Leu	Phe	Gly	Met	Val	Val	Leu	Ala	Leu	Val	Val	Trp	Lys	Ile	Phe
			100					105					110		
Thr	Leu	Ser	Arg	Ala	Thr	Ala	Val	Lys	Glu	Arg	Gly	Lys	Asn	Arg	Cys
		115					120					125			
Ser	Pro	Cys	Trp	Ala	Ser	Arg	Ala	Trp	Trp	Val					
	130					135									

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<210> 43
<211> 1650
<212> DNA
<213> Homo sapiens
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<400> 43							
atggcgacgc	ccagggggcct	ggggggccctg	ctcctgctcc	tcttgcctcc	gacctcaggt		60
cagggaaaagc	ccaccgaagg	gccaaagaaac	acctgcctgg	ggagcaacaa	catgtacgac		120
atcttcaact	tgaatgacaa	ggctttgtgc	ttcaccaagt	gcaggcagtc	gggcagcgac		180
tcttgaatg	tggaaaactt	gcagagatac	tggctaaact	acgaggccca	tctgatgaag		240
gaaggtttga	cgcagaaggt	gaacacgcct	ttcctgaagg	ctttgggtcca	gaacctcagc		300
accaacactg	cagaagactt	ctatcttctc	ctggagccct	ctcaggttcc	gaggcaggtg		360
atgaaggacg	aggacaagcc	ccctgacaga	gtgcgacttc	ccaagagcct	ttttcgatcc		420
ctgccaggca	acaggctctgt	ggtccgcctg	gccgtcacca	ttctggacat	tgggtccagg		480
actctcttca	agggcccccg	gctcggcctg	ggagatggca	gcggcggtgt	gaacaatcgc		540
ctggtgggtt	tgagtgtggg	acaaatgcac	gtcaccaagc	tggctgagcc	tctggagatc		600
gtcttctctc	accagcgacc	gccccctaac	atgacctca	cctgtgtatt	ctgggatgtg		660
actaaaggga	ccactggaga	ctgtcttctc	gagggctgct	ccacggaggt	cagacctgag		720
gggaccgtgt	gctgctgtga	ccacctgacc	tttttcgcc	tgctcctgag	accaccttg		780
gaccagtcca	cggtgcatac	cctcacacgc	atctcccagg	cgggctgtgg	ggtctccatg		840
atcttctctg	ccttcaccat	tattctttat	gcctttctga	ggctttcccg	ggagaggttc		900
aagtcagaag	atgccccaaa	gatccacgtg	gccctgggtg	gcagcctgtt	cctcctgaat		960
ctggccttct	tgggtcaatgt	ggggagtggc	tcaaaggggt	ctgatgctgc	ctgctgggcc		1020
cggggggctg	tcttccacta	cttctgtctc	tgtgccttca	cctggatggg	ccttgaagcc		1080
ttccacctct	acctgctcgc	tgtcagggtc	ttcaacacct	acttcgggca	ctacttctctg		1140
aagctgagcc	tgggtgggctg	gggcctgccc	gccctgatgg	tcacgggcac	tgggagtgcc		1200
aacagctacg	gcctctacac	catccgtgat	agggagaacc	gcacctctct	ggagctatgc		1260
tggttccgtg	aagggacaac	catgtacgcc	ctctatatca	ccgtccacgg	ctacttctctc		1320
atcaccttcc	tctttggcat	ggtggctctg	gccttgggtg	tctggaagat	cttcaccttg		1380
tcccgtgcta	cagcgggtcaa	ggagcggggg	aagaaccgga	agaaggtgct	cacctgtctg		1440
ggcctctcga	gccttgggtgg	tgtgacatgg	gggttggcca	tcttcacccc	gttgggcctc		1500
tccaccgtct	acatcttttg	acttttcaac	tccttgcaag	gtgtcttcat	ctgtctgttg		1560
ttaccattcc	tttacctccc	aagtcagagc	accacagtct	cctcctctac	tgcaagattg		1620
gaccaggccc	actccgcctc	tcaagaatag					1650

```
<210> 44
<211> 549
<212> PRT
<213> Homo sapiens
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<400> 44
Met Ala Thr Pro Arg Gly Leu Gly Ala Leu Leu Leu Leu Leu Leu Leu
1 5 10 15
Pro Thr Ser Gly Gln Glu Lys Pro Thr Glu Gly Pro Arg Asn Thr Cys
20 25 30

Gly	Leu	Ser	Ser	Leu	Val	Gly	Val	Thr	Trp	Gly	Leu	Ala	Ile	Phe	Thr	
				485					490					495		
Pro	Leu	Gly	Leu	Ser	Thr	Val	Tyr	Ile	Phe	Ala	Leu	Phe	Asn	Ser	Leu	
				500					505					510		
Gln	Gly	Val	Phe	Ile	Cys	Cys	Trp	Phe	Thr	Ile	Leu	Tyr	Leu	Pro	Ser	
				515					520					525		
Gln	Ser	Thr	Thr	Val	Ser	Ser	Ser	Thr	Ala	Arg	Leu	Asp	Gln	Ala	His	
				530					535					540		
Ser	Ala	Ser	Gln	Glu												
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<210> 45
<211> 1020
<212> DNA
<213> Homo sapiens
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<210> 46
<211> 339
<212> PRT
<213> Homo sapiens
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			20					25					30		
Val	Cys	Cys	Cys	Asp	His	Leu	Thr	Phe	Phe	Ala	Leu	Leu	Leu	Arg	Pro
		35					40					45			
Thr	Leu	Asp	Gln	Ser	Thr	Val	His	Ile	Leu	Thr	Arg	Ile	Ser	Gln	Ala
	50					55					60				
Gly	Cys	Gly	Val	Ser	Met	Ile	Phe	Leu	Ala	Phe	Thr	Ile	Ile	Leu	Tyr
65					70					75				80	
Ala	Phe	Leu	Arg	Leu	Ser	Arg	Glu	Arg	Phe	Lys	Ser	Glu	Asp	Ala	Pro
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Lys	Ile	His	Val	Ala	Leu	Gly	Gly	Ser	Leu	Phe	Leu	Leu	Asn	Leu	Ala
			100					105					110		
Phe	Leu	Val	Asn	Val	Gly	Ser	Gly	Ser	Lys	Gly	Ser	Asp	Ala	Ala	Cys

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Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr		
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Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val		
145	150	155
Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly		
165	170	175
Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser		
180	185	190
Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu		
195	200	205
Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr		
210	215	220
Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu		
225	230	235
Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val		
245	250	255
Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu		
260	265	270
Ser Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu		
275	280	285
Gly Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly		
290	295	300
Val Phe Ile Cys Cys Trp Phe Thr Ile Leu Tyr Leu Pro Ser Gln Ser		
305	310	315
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Ser Gln Glu		

<210> 47

<211> 1203

<212> DNA

<213> Homo sapiens

<400> 47

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tag

1203

<210> 48
<211> 400
<212> PRT
<213> Homo sapiens

<400> 48

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Val	Gly	Leu	Ser	Val	Gly	Gln	Met	His	Val	Thr	Lys	Leu	Ala	Glu	Pro
		35					40						45		
Leu	Glu	Ile	Val	Phe	Ser	His	Gln	Arg	Pro	Pro	Pro	Asn	Met	Thr	Leu
		50				55					60				
Thr	Cys	Val	Phe	Trp	Asp	Val	Thr	Lys	Gly	Thr	Thr	Gly	Asp	Trp	Ser
65					70					75					80
Ser	Glu	Gly	Cys	Ser	Thr	Glu	Val	Arg	Pro	Glu	Gly	Thr	Val	Cys	Cys
				85					90					95	
Cys	Asp	His	Leu	Thr	Phe	Phe	Ala	Leu	Leu	Leu	Arg	Pro	Thr	Leu	Asp
			100					105					110		
Gln	Ser	Thr	Val	His	Ile	Leu	Thr	Arg	Ile	Ser	Gln	Ala	Gly	Cys	Gly
		115					120					125			
Val	Ser	Met	Ile	Phe	Leu	Ala	Phe	Thr	Ile	Ile	Leu	Tyr	Ala	Phe	Leu
		130				135					140				
Arg	Leu	Ser	Arg	Glu	Arg	Phe	Lys	Ser	Glu	Asp	Ala	Pro	Lys	Ile	His
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Val	Ala	Leu	Gly	Gly	Ser	Leu	Phe	Leu	Leu	Asn	Leu	Ala	Phe	Leu	Val
				165					170					175	
Asn	Val	Gly	Ser	Gly	Ser	Lys	Gly	Ser	Asp	Ala	Ala	Cys	Trp	Ala	Arg
			180					185					190		
Gly	Ala	Val	Phe	His	Tyr	Phe	Leu	Cys	Ala	Phe	Thr	Trp	Met	Gly	
		195					200				205				
Leu	Glu	Ala	Phe	His	Leu	Tyr	Leu	Leu	Ala	Val	Arg	Val	Phe	Asn	Thr
		210				215					220				
Tyr	Phe	Gly	His	Tyr	Phe	Leu	Lys	Leu	Ser	Leu	Val	Gly	Trp	Gly	Leu
225					230					235					240
Pro	Ala	Leu	Met	Val	Ile	Gly	Thr	Gly	Ser	Ala	Asn	Ser	Tyr	Gly	Leu
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Tyr	Thr	Ile	Arg	Asp	Arg	Glu	Asn	Arg	Thr	Ser	Leu	Glu	Leu	Cys	Trp
			260					265					270		
Phe	Arg	Glu	Gly	Thr	Thr	Met	Tyr	Ala	Leu	Tyr	Ile	Thr	Val	His	Gly
		275					280					285			
Tyr	Phe	Leu	Ile	Thr	Phe	Leu	Phe	Gly	Met	Val	Val	Leu	Ala	Leu	Val
		290				295					300				
Val	Trp	Lys	Ile	Phe	Thr	Leu	Ser	Arg	Ala	Thr	Ala	Val	Lys	Glu	Arg
305					310					315					320
Gly	Lys	Asn	Arg	Lys	Lys	Val	Leu	Thr	Leu	Leu	Gly	Leu	Ser	Ser	Leu
				325					330					335	
Val	Gly	Val	Thr	Trp	Gly	Leu	Ala	Ile	Phe	Thr	Pro	Leu	Gly	Leu	Ser
			340					345					350		
Thr	Val	Tyr	Ile	Phe	Ala	Leu	Phe	Asn	Ser	Leu	Gln	Gly	Val	Phe	Ile
		355					360					365			
Cys	Cys	Trp	Phe	Thr	Ile	Leu	Tyr	Leu	Pro	Ser	Gln	Ser	Thr	Thr	Val
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Ser Ser Ser Thr Ala Arg Leu Asp Gln Ala His Ser Ala Ser Gln Glu
 385 390 395 400

<210> 49
 <211> 825
 <212> DNA
 <213> Homo sapiens

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 <212> PRT
 <213> Homo sapiens

<400> 50
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 Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe
 35 40 45
 Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
 50 55 60
 Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
 65 70 75 80
 Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
 85 90 95
 Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
 100 105 110
 Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
 115 120 125
 Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
 130 135 140
 Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
 145 150 155 160
 His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
 165 170 175
 Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
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 Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser
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<210> 51
<211> 612
<212> DNA
<213> Homo sapiens
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<210> 52
<211> 203
<212> PRT
<213> Homo sapiens
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<210> 53
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 <213> Homo sapiens

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